

What is claimed is:

1. In a satellite communication system, a method comprising steps of:
allocating for control a first portion of a pool of slots within a return channel;
allocating for data a second portion of the pool of slots, wherein the second portion is accessible by circuit-switched TDM allocations, reservation allocations, and random access.
2. The method of claim 1, further comprising a step of accessing the first portion of the pool of slots through random access.
3. The method of claim 2, wherein the step of accessing includes transmitting duplicate control bursts on the first portion.
4. The method of claim 3, wherein more than two duplicate control bursts are transmitted.
5. The method of claim 1, wherein each slot in the first portion includes a plurality of mini-slots, the method further comprising step of:
transmitting data bursts in the second portion of the pool of slots; and
transmitting control bursts in the mini-slots, the control bursts being shorter in duration than the data bursts.
6. The method of claim 1, wherein the first portion of the pool of slots includes frequencies distinct from frequencies in the second portion of the pool of slots.

7. The method of claim 1, wherein the first and second portions of the pool of slots share a same set of frequencies.

8. The method of claim 1, further comprising a step of allocating a TDM slot allocation for control bursts within the first portion to a first remote terminal.

9. The method of claim 8, wherein the step of allocating the TDM slot allocation includes the first remote terminal allocating for itself the at least one TDM slot allocation.

10. The method of claim 9, further comprising steps of:
the first remote terminal transmitting a control burst in random access in a chosen slot; and
receiving a response to the control burst, wherein the step of the first remote terminal allocating for itself the at least one TDM slot allocation is performed responsive to receiving a response to the control burst.

11. The method of claim 10, wherein the TDM slot allocation that the first remote terminal allocates for itself is the chosen slot associated with the response, the response pointing to the chosen slot.

12. The method of claim 8, further including a step of generating by a second remote terminal a random access control burst that collides with the first remote terminal.

13. The method of claim 8, further comprising monitoring traffic generated by a plurality of remote terminals in the return channel, wherein the step of allocating the TDM slot allocation is performed depending upon the traffic.

14. The method of claim 8, further comprising a second remote terminal transmitting control bursts on the first portion through random access.

15. The method of claim 1, further comprising broadcasting an indication of which portion of the pool of slots is allocated as the first portion.

16. The method of claim 15, wherein the allocated first and second portions change dynamically, wherein any slot in the pool of slots that is not assigned for reservation or circuit-switched TDM allocation is available for a control burst or random access data burst.

17. A remote terminal configured to communicate with a satellite system including a plurality of other remote terminals, the remote terminal configured to transmit over a return channel shared with the other remote terminals, the return channel including a control portion and a data portion, wherein the remote terminal is configured to transmit over the data portion through circuit-switched TDM allocations, reservation allocations, and random access.

18. The remote terminal of claim 17, wherein the control portion includes a plurality of mini-slots within slots of the data portion, the remote terminal being further configured to

transmit data bursts within at least one of the slots of the data portion and control bursts within at least one of the mini-slots, the control bursts being shorter in duration than the data bursts.

19. The remote terminal of claim 17, wherein the remote terminal is further configured to access the control portion using random access.

20. The remote terminal of claim 19, wherein the remote terminal is further configured to transmit duplicative control bursts over the control portion.

21. The remote terminal of claim 17, wherein the control portion includes frequencies the same as frequencies of the data portion.

22. The remote terminal of claim 17, wherein the control portion includes frequencies distinct from frequencies of the data portion.

23. A remote terminal configured to communicate with a satellite system including a plurality of other remote terminals, the remote terminal configured to transmit over a return control channel shared with the other remote terminals, wherein the remote terminal is configured to access the return control channel using random access and allocated access.

24. The remote terminal of claim 23, wherein the remote terminal is further configured to receive a TDM control allocation from the satellite system and to access the return control channel in accordance with the TDM control allocation.

25. The remote terminal of claim 24, wherein the satellite system monitors traffic and generates the TDM control allocation depending upon the traffic.

26. The remote terminal of claim 23, wherein the remote terminal is further configured to self-allocate a TDM allocation in the return control channel for control traffic.

27. The remote terminal of claim 26, wherein the remote terminal is configured to access the at least one slot in the return control channel by selecting either a request for data channel allocation or a placeholder, and transmitting either the request for data channel allocation or the placeholder.

28. The remote terminal of claim 27, wherein the remote terminal is configured to transmit the placeholder when the remote terminal does not need a data channel allocation.

29. The remote terminal of claim 23, wherein the remote terminal is a very small aperture terminal (VSAT).

30. In a satellite communication system, a method comprising steps of:
allocating a first subset of slots from a single pool of slots using reservation allocations and circuit-switched TDM allocations; and
making available a second subset of slots from the single pool of slots for control random access and data random access.